

WHAT IS CLAIMED IS:

1. A method of forming a gate electrode for a Fin Field Effect Transistor (FinFET), comprising:

forming a first layer over a fin;

forming an etch stop layer over the first layer;

5 applying an anti-reflective coating to the etch stop layer;

forming a photo-resist layer in a gate pattern over the anti-reflective coating;

etching the anti-reflective coating; and

etching the etch stop layer and the first layer to form the gate electrode in the first layer in a shape corresponding to the gate pattern.

2. The method of claim 1, further comprising:

removing the photo-resist layer subsequent to etching the etch stop layer and the first layer.

3. The method of claim 1, wherein the first layer comprises polysilicon.

4. The method of claim 1, wherein the etch stop layer comprises Ti.

5. The method of claim 1, wherein the etch stop layer comprises TiN.

6. The method of claim 1, wherein the anti-reflective coating comprises SiN.

B 7. The method of claim 1, wherein etching the anti-reflective coating comprises:
etching the anti-reflective coating using CF₄/Ar.